Amendments to the Drawings:

Formal drawings are submitted herewith which incorporate the changes required by the Examiner. Approval by the Examiner is respectfully requested.

Attachment: Replacement Figures 1-3

REMARKS

Claims 1-49 are rejected. Claims 50-91 are withdrawn from consideration. Claims 1, 14 and 22-27 have been amended. Claims 12, 13, and 21 have been canceled. Claims 1-11, 14-20, 22-91 are presently pending in the application. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

The basis for the amendment of claim 14 is found on pg. 17, line 4 of the specification as originally filed. The basis for the amendment of claim 1 is found in claim 21 as originally filed. The amendment of claim 26 is based on pg. 33, lines 23-30 of the specification as originally filed.

Election/Restrictions:

The Examiner has required restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-49, drawn to an article, classified in class 428, subclass 195.1.

II. Claims 50-91, drawn to a method of making a base, classified in class 427, subclass 100,

Indicating that the inventions are distinct, each from the other because Inventions I and II are related as process of making and product made.

During a telephone conversation with Lynne Blank on 4/3/06 a provisional election was made with traverse to prosecute the invention of I, claims 1-49. However, Applicants elect the invention of I, claims 1-49, without traverse and Claims 50-91 withdrawn.

Claim Objections:

The Examiner has objected to Claim 14 because the surface roughness value is missing the unit. Applicants have amended claim 14 accordingly.

Rejection of Claims 26 under 35 USC § 112:

The Examiner has rejected Claim 26 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, as the use of "autochrome" appears to be a trademark, the use of trademarked terms in claims does not identify or describe the goods associated with the trademark or trade

name, and trademarks or trade names are used to identify a source of goods, and not the goods themselves. See MPEP 2173.05(u).

However, MPEP 608.01(v) states that "Language such as "the product X (a descriptive name) sold under the trademark Y" is permissible." Claim 26 has been amended accordingly.

Rejection Of Claims 1-3, and 7-13 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1-3, and 7-13 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 6,872,673 to MacAulay. Claim 1 has been amended to include the limitations of claim 21. Therefore, this rejection is moot.

Rejection Of Claims 1-13 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1-13 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 6,093,481 to Lynn et al. Claim 1 has been amended to include the limitations of claim 21. Therefore, this rejection is moot.

Rejection Of Claims 1-3, 7-13, 15, and 18 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1-3, 7-13, 15, and 18 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 4,764,420 to Gluck et al. Claim 1 has been amended to include the limitations of claim 21. Therefore, this rejection is moot.

Rejection Of Claims 1-20, 29 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1-20, 29 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 6,103,152 to Gehlsen et al. Claim 1 has been amended to include the limitations of claim 21. Therefore, this rejection is moot.

Rejection Of Claims 1-13, 19-25, 28-39, and 41 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1-13, 19-25, 28-39, and 41 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 6,447,976 to Dontula et al, indicating that Reeves teaches an article comprising a base wherein said base comprises a closed cell polypropylene or polyurethane expanded foam core sheet, wherein said closed cell foam core sheet comprises two closed cell foam layers, wherein said at least one closed cell foam layer, and wherein said closed cell foam core sheet has a density wherein said density comprises a gradient, Reeves teaches the density gradient in the

polymer core is effected by the expansion of cells and amount of air entrapped and may be contained in a numerous amounts of layers to reach the chosen thickness, and, while Reeves doesn't state the density gradient decreasing from center to surface or the use of three foam layers, it would have been obvious to one having ordinary skill to modify the invention based on the teachings of Reeves above, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. The Examiner continues that, although Reeves does not teach that the polypropylene or polyurethane closed cell expanded foam layer comprises a polymer that has been expanded through the use of a blowing agent, using the presently claimed polymers of claims 3-6 and, if the broad term "a gaseous phase" is intended to mean a material, Dontula teaches an article having a foamed polymer core comprising a polymer foam core, blowing agent, solid polymer matrix, and a gaseous phase as processing enhancements for the foam, making it obvious to one having ordinary skill in the art to have modified the foam of Reeves to use the ingredients as claimed because Dontula teaches a foamed polymer core comprising a polymer foam core, blowing agent, solid polymer matrix, and a gaseous phase as processing enhancements for the foam.

Reeves discloses thermoplastic composite materials and, more particularly, thermoplastic multi-layer composite structure, which consists in a first embodiment of a co-extruded acrylic polypropylene outer skin and high melt strength polypropylene substrate which is attached to a first surface of a polypropylene foam core. An inner polypropylene skin can be provided and is attached to a second surface of the foam core. The foam core can either be constructed from an expanded polypropylene or an extruded polypropylene. Where an expanded polypropylene foam core is provided, the foam core is attached to the outer and inner skin through the use of a polypropylene adhesive. Where the extruded polypropylene foam core is provided, the skins can be attached to the foam core through a welding or bonding process in lieu of adhesives. The polypropylene adhesives can also be utilized for attaching the skins to the extruded foam core. Additionally, the extruded foam core can vary in density to provide a composite foam core. Preferably, the various densities of the composite foam core are arranged such that the lowest density foam is provided at

the center of the core and the varying densities of the foam core extend outward from the center in numerical order.

Dontula '976 discloses imaging media. In a preferred form, it relates to supports for photographic, ink jet, thermal, and electrophotographic media on a base of a closed cell foam core sheet and adhered thereto an upper and lower flange sheet. The imaging member has a stiffness of between 50 and 250 millinewtons and at least one layer of the base comprises whitening agent and the element has L* of greater than 90.4.

The present invention relates to an article comprising a base and at least one imaging layer. The base comprises a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam layer that has a density gradient.

To establish a prima facia case of obviousness, there must be some suggestion or motivation in the reference or in the general knowledge available to one skilled in the art to modify the reference, there must be a reasonable expectation of success, and the prior art reference must teach or suggest all the claim limitations.

The present claims are directed to a layer of foam that has a density gradient. The reference to Reeves teaches foam layers with the same gradient throughout the foam layer. To form a core of varying density, multiple layers of foam, each layer having a different density but the same density throughout the individual layer, are fused or bonded together. See Fig. 3-5, 7-10, as well as col. 3, lines 49-55, and col. 6, lines20-24 of Reeves. Dontula is silent with respect to foams having density gradients. The references to Reeves and Dontula, whether alone or in combination, fail to teach or suggest the presently claimed foam core layer for an imaging element, wherein a single layer of foam has a density gradient.

Neither do the references provide any likelihood of success. Dontula, while disclosing foam for use in the support of an imaging element, fails to mention gradient density in the foam layer. Reeves discloses the use of multiple layers of foam, fused together, to produce a composite material which can be utilized to replace fiberglass or other materials such as polyurethanes during the manufacture of products normally containing fiberglass or the other

materials as a primary component. Reeves does not provide any likelihood of success for the use of a foam core as a support in imaging elements. Neither would one of ordinary skill in the art look to the teachings of Reeves for information relating to the support for an imaging element, as the structure of Reeves provides properties, such as a relatively hard and stiff surface, superior impact strength as compared to fiberglass, and will absorb a relatively higher amount energy as compared to fiberglass, wood, composite structures containing polyurethane or similar structures. See col. 3, line 63 – col. 4, line 26, as compared to the present specification, at pg. 1, lines 8-12, pg. 16, line 6 – pg. 17, line 5, and pg. 19, line 13 – 24. As indicated, materials that are too stiff are not manufacturable. One of ordinary skill in the art would not look to a stiff material useful, for example, as a boat hull, to duplicate the stiffness requirements of photographic paper. Finally, Reeves requires multiple steps to produce a gradient core, that is, production of individual foam layers of differing densities and fusing the layers together, to produce a gradient density core. The present invention provides a foam layer with a density gradient in one step.

Neither reference teaches or suggests a single layer of foam with a density gradient, as presently claimed. Therefore, the references fail to disclose all of the limitations of the present claims.

Therefore, since the references, alone and in combination, fail to provide any suggestion to combine the references or modify the references to produce an article comprising an imaging layer and a base, wherein the base is a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam layer that has a density gradient, fail to include any likelihood of success in providing such an article and fail to include all of the limitations of the present claims, specifically with respect to a closed cell foam layer that has a density gradient, the Applicants request that the Examiner reconsider and withdraw the rejection.

Claims 2-11, 14-20, 22- 49 benefit from dependence on claim 1 which Applicants believe is patentable over Reeves and Dontula as discussed above.

Rejection Of Claims 26 Under 35 U.S.C. §103(a):

The Examiner has rejected Claim 26 under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,916,672 to Reeves et al. in view of U.S. Pat. No. 6,447,976 to Dontula et al. and further in view of U.S. Pat. No. 6,876,467 to Yamaguchi, as, in addition to the reasoning relating to Reeves and Dontula as described above, Yamaguchi teaches a printer that prints an image shot by a digital still camera or the like on photographic paper and operates on the thermo-autochrome (TA) method, as on the market, making it obvious to one having ordinary skill in the art to have modified the combination to include an autochrome image.

Reeves discloses thermoplastic composite materials and, more particularly, thermoplastic multi-layer composite structure, which consists in a first embodiment of a co-extruded acrylic polypropylene outer skin and high melt strength polypropylene substrate which is attached to a first surface of a polypropylene foam core. An inner polypropylene skin can be provided and is attached to a second surface of the foam core. The foam core can either be constructed from an expanded polypropylene or an extruded polypropylene. Where an expanded polypropylene foam core is provided, the foam core is attached to the outer and inner skin through the use of a polypropylene adhesive. Where the extruded polypropylene foam core is provided, the skins can be attached to the foam core through a welding or bonding process in lieu of adhesives. The polypropylene adhesives can also be utilized for attaching the skins to the extruded foam core. Additionally, the extruded foam core can vary in density to provide a composite foam core. Preferably, the various densities of the composite foam core are arranged such that the lowest density foam is provided at the center of the core and the varying densities of the foam core extend outward from the center in numerical order.

Dontula '976 discloses imaging media. In a preferred form, it relates to supports for photographic, ink jet, thermal, and electrophotographic media. The invention relates to an imaging member comprising an imaging layer and a base wherein said base comprises a closed cell foam core sheet and adhered thereto an upper and lower flange sheet, and wherein said imaging member has a stiffness of between 50 and 250 millinewtons and at least one layer of said base comprises whitening agent and said element has L* of greater than 90.4.

Yamaguchi discloses a printer with an automatic density adjusting function and a density adjusting method of the printer. More particularly, this invention relates to a printer with an automatic density adjusting function that prints a color image on a color photographic paper that has a cyan (C) layer, a magenta (M) layer and an yellow (Y) layer by producing a color of each layer and a density adjusting method of the printer. When densities of C, M and Y colors for automatic density adjustment are measured, test patterns of R, G and B colors are printed on TA paper, and a fixing lamp throws lights that have bright line spectrums of R, G and B colors onto the test patterns and amounts of reflected lights of the test patterns of R, G and B colors are measured with a light-receiving sensor that is an HP sensor for determining a reference position of the TA paper. Then, the densities of C, M and Y colors are calculated according to the amounts of the reflected lights. The color production of the C, M and Y layers of the TA paper is adjusted so that the calculated densities of C, M and Y colors are target densities.

The present invention relates to an article comprising a base and at least one imaging layer. The base comprises a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam that has a density gradient.

To establish a prima facia case of obviousness, there must be some suggestion or motivation in the reference or in the general knowledge available to one skilled in the art to modify the reference, there must be a reasonable expectation of success, and the prior art reference must teach or suggest all the claim limitations.

Claim 26 benefits from dependence on claim 1 which Applicants believe is patentable over Reeves and Dontula as discussed above.

In addition, the present claims are directed to a layer of foam that has a density gradient. The reference to Reeves teaches foam layers with the same gradient throughout the foam layer. As discussed above, to form a core of varying density, multiple layers of foam, each layer having a different density but the same density throughout the individual layer, are fused or bonded together. Dontula is silent with respect to foams having density gradients. Yamaguchi is silent with respect to the use of foam as the base for an imaging element. The

references to Reeves, Yamaguchi, and Dontula, whether alone or in combination, fail to teach or suggest the presently claimed foam core layer for an imaging element, wherein a single layer of foam has a density gradient.

Neither do the references provide any likelihood of success. Dontula, while disclosing foam for use in the support of an imaging element, fails to mention gradient density in the foam layer. Yamaguchi is silent relating to the composition of the base for the imaging element and specifically fail to contain any disclosure to foam. Reeves discloses the use of multiple layers of foam, fused together, to produce a composite material which can be utilized to replace fiberglass or other materials such as polyurethanes during the manufacture of products normally containing fiberglass or the other materials as a primary component. Reeves does not provide any likelihood of success for the use of a foam core as a support in imaging elements. Neither would one of ordinary skill in the art look to the teachings of Reeves for information relating to the support for an imaging element, as the structure of Reeves provides properties, such as a relatively hard and stiff surface, superior impact strength as compared to fiberglass, and will absorb a relatively higher amount energy as compared to fiberglass, wood, composite structures containing polyurethane or similar structures, as previously discussed.

None of the references teaches or suggests a single layer of foam with a density gradient, as presently claimed. Therefore, the references fail to disclose all of the limitations of the present claims.

Therefore, since the references, alone and in combination, fail to provide any suggestion to combine the references or modify the references to produce an article comprising an imaging layer and a base, wherein the base is a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam layer that has a density gradient, fail to include any likelihood of success in providing such an article and fail to include all of the limitations of the present claims, specifically with respect to a closed cell foam layer that has a density gradient, the Applicants request that the Examiner reconsider and withdraw the rejection.

Rejection Of Claims 27 Under 35 U.S.C. §103(a):

The Examiner has rejected Claim 27 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 6,447,976 to Dontula et al. and further in view of USPN 6,342,329 to Tsuda et al, as, relying of Reeves and Dontula as above, Tsuda teaches photocuring compositions including a dye are supported on a substrate in a microcapsule-encapsulated state, so that it is possible to provide an inexpensive image-forming medium with which full-color printing is possible and a reduction in density of the 3 primary colors, etc., can be prevented using microcapsules that can be easily produced by conventional methods, making it obvious to one having ordinary skill in the art to have modified the combination to further include a crushable dye encapsulated imaging layer.

Reeves discloses thermoplastic composite materials and, more particularly, thermoplastic multi-layer composite structure, which consists in a first embodiment of a co-extruded acrylic polypropylene outer skin and high melt strength polypropylene substrate which is attached to a first surface of a polypropylene foam core. An inner polypropylene skin can be provided and is attached to a second surface of the foam core. The foam core can either be constructed from an expanded polypropylene or an extruded polypropylene. Where an expanded polypropylene foam core is provided, the foam core is attached to the outer and inner skin through the use of a polypropylene adhesive. Where the extruded polypropylene foam core is provided, the skins can be attached to the foam core through a welding or bonding process in lieu of adhesives. The polypropylene adhesives can also be utilized for attaching the skins to the extruded foam core. Additionally, the extruded foam core can vary in density to provide a composite foam core. Preferably, the various densities of the composite foam core are arranged such that the lowest density foam is provided at the center of the core and the varying densities of the foam core extend outward from the center in numerical order.

Dontula '976 discloses imaging media. In a preferred form, it relates to supports for photographic, ink jet, thermal, and electrophotographic media. The invention relates to an imaging member comprising an imaging layer and a base wherein said base comprises a closed cell foam core sheet and adhered thereto an upper and lower flange sheet, and wherein said imaging member has a

stiffness of between 50 and 250 millinewtons and at least one layer of said base comprises whitening agent and said element has L* of greater than 90.4.

Tsuda discloses an image-forming medium used in image-forming apparatuses such as printers, in which an image-forming medium comprises a substrate and several types of photo-curing compositions with sensitivity peaks in different wavelength regions supported thereon. Each of the several types of photocuring compositions contains a spectral sensitizer which is designed so that there is apparently no crosstalk in an image which is formed using the image-forming medium.

The present invention relates to an article comprising a base and at least one imaging layer. The base comprises a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam that has a density gradient.

To establish a prima facia case of obviousness, there must be some suggestion or motivation in the reference or in the general knowledge available to one skilled in the art to modify the reference, there must be a reasonable expectation of success, and the prior art reference must teach or suggest all the claim limitations.

Claim 27 benefits from dependence on claim 1 which Applicants believe is patentable over Reeves and Dontula as discussed above.

In addition, the present claims are directed to a layer of foam that has a density gradient. The reference to Reeves teaches foam layers with the same gradient throughout the foam layer. As discussed above, to form a core of varying density, multiple layers of foam, each layer having a different density but the same density throughout the individual layer, are fused or bonded together. Dontula is silent with respect to foams having density gradients. Tsuda is silent with respect to the use of foam as the base for an imaging element. The references to Reeves, Tsuda, and Dontula, whether alone or in combination, fail to teach or suggest the presently claimed foam core layer for an imaging element, wherein a single layer of foam has a density gradient.

Neither do the references provide any likelihood of success. Dontula, while disclosing foam for use in the support of an imaging element, fails to mention gradient density in the foam layer. Tsuda is silent relating to the

composition of a base for an imaging element made of foam. Reeves discloses the use of multiple layers of foam, fused together, to produce a composite material which can be utilized to replace fiberglass or other materials such as polyurethanes during the manufacture of products normally containing fiberglass or the other materials as a primary component. Reeves does not provide any likelihood of success for the use of a foam core as a support in imaging elements. Neither would one of ordinary skill in the art look to the teachings of Reeves for information relating to the support for an imaging element, as the structure of Reeves provides properties, such as a relatively hard and stiff surface, superior impact strength as compared to fiberglass, and will absorb a relatively higher amount energy as compared to fiberglass, wood, composite structures containing polyurethane or similar structures, as previously discussed.

None of the references teaches or suggests a single layer of foam with a density gradient, as presently claimed. Therefore, the references fail to disclose all of the limitations of the present claims.

Therefore, since the references, alone and in combination, fail to provide any suggestion to combine the references or modify the references to produce an article comprising an imaging layer and a base, wherein the base is a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam layer that has a density gradient, fail to include any likelihood of success in providing such an article and fail to include all of the limitations of the present claims, specifically with respect to a closed cell foam layer that has a density gradient, the Applicants request that the Examiner reconsider and withdraw the rejection.

Rejection Of Claims 40 Under 35 U.S.C. §103(a):

The Examiner has rejected Claim 40 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 6,447,976 to Dontula et al. and further in view of USPN 6,627,018 to O'Neill et al, as, considering Reeves and Dontula as above, Dontula teaches the flange comprises polyester and glass fibers (col. 7, lines 20-23) and O'Neill teaches a polymer foam core surrounded by polymeric sheets and includes fibers to make a fibrous layer to impart to the composite modulus stiffness and compressive strength, making it obvious to one having ordinary skill in the art to have

modified the combination to include a flange of fabric because Dontula teaches the flange comprises polyester and glass fibers and O'Neill teaches a polymer foam core surrounded by polymeric sheets and includes fibers to make a fibrous layer to impart to the composite modulus stiffness and compressive strength.

Reeves discloses thermoplastic composite materials and, more particularly, thermoplastic multi-layer composite structure, which consists in a first embodiment of a co-extruded acrylic polypropylene outer skin and high melt strength polypropylene substrate which is attached to a first surface of a polypropylene foam core. An inner polypropylene skin can be provided and is attached to a second surface of the foam core. The foam core can either be constructed from an expanded polypropylene or an extruded polypropylene. Where an expanded polypropylene foam core is provided, the foam core is attached to the outer and inner skin through the use of a polypropylene adhesive. Where the extruded polypropylene foam core is provided, the skins can be attached to the foam core through a welding or bonding process in lieu of adhesives. The polypropylene adhesives can also be utilized for attaching the skins to the extruded foam core. Additionally, the extruded foam core can vary in density to provide a composite foam core. Preferably, the various densities of the composite foam core are arranged such that the lowest density foam is provided at the center of the core and the varying densities of the foam core extend outward from the center in numerical order.

Dontula '976 discloses imaging media. In a preferred form, it relates to supports for photographic, ink jet, thermal, and electrophotographic media. The invention relates to an imaging member comprising an imaging layer and a base wherein said base comprises a closed cell foam core sheet and adhered thereto an upper and lower flange sheet, and wherein said imaging member has a stiffness of between 50 and 250 millinewtons and at least one layer of said base comprises whitening agent and said element has L* of greater than 90.4.

O'Neill discloses a system and method for forming a composite structure that involves providing at least two polymeric sheets as outer layers such that a cavity is formed therebetween, adhesively bonding fibrous layers to the polymeric layers to hold the fibrous layers in place during processing, and processing to produce fibrous layers with a dense, resinous layer between each fibrous layer and adjacent polymeric layer.

The present invention relates to an article comprising a base and at least one imaging layer. The base comprises a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam that has a density gradient.

To establish a prima facia case of obviousness, there must be some suggestion or motivation in the reference or in the general knowledge available to one skilled in the art to modify the reference, there must be a reasonable expectation of success, and the prior art reference must teach or suggest all the claim limitations.

Claim 40 benefits from dependence on claim 1 which Applicants believe is patentable over Reeves and Dontula as discussed above.

In addition, the present claims are directed to a layer of foam that has a density gradient. The reference to Reeves teaches foam layers with the same gradient throughout the foam layer. As discussed above, to form a core of varying density, multiple layers of foam, each layer having a different density but the same density throughout the individual layer, are fused or bonded together. Dontula is silent with respect to foams having density gradients. O'Neill discloses a foam, injected into a space between two fibrous layers and driven through the respective fibrous layer to impregnate the fibrous layer and form a dense, resinous layer between each fibrous layer and adjacent polymeric layer. (Abstract) O'Neill does not disclose a foam layer with a density gradient. The references to Reeves, O'Neill, and Dontula, whether alone or in combination, fail to teach or suggest the presently claimed foam core layer for an imaging element, wherein a single layer of foam has a density gradient.

Neither do the references provide any likelihood of success. Dontula, while disclosing foam for use in the support of an imaging element, fails to mention gradient density in the foam layer. O'Neill discloses flange layers, but fails to mention an article having a foam core surrounded by fabric flange layers. Reeves discloses the use of multiple layers of foam, fused together, to produce a composite material which can be utilized to replace fiberglass or other materials such as polyurethanes during the manufacture of products normally containing fiberglass or the other materials as a primary component. Reeves does not provide any likelihood of success for the use of a foam core as a support in

imaging elements. Neither would one of ordinary skill in the art look to the teachings of Reeves or O'Neill for information relating to the support for an imaging element, as the structure of Reeves provides properties, such as a relatively hard and stiff surface, superior impact strength as compared to fiberglass, and will absorb a relatively higher amount energy as compared to fiberglass, wood, composite structures containing polyurethane or similar structures, as previously discussed. The reference to O'Neill is particularly advantageous for forming relatively large, rigid composite structures, such as structural components for automobiles, trucks, recreational vehicles, and boats. (Field of the Invention; see also col. 4, lines 20-32) As indicated at pg. 1, lines 8-12, pg. 16, line 6 – pg. 17, line 5, and pg. 19, line 13 – 24 of the present specification and discussed above for Reeves, materials that are too stiff are not manufacturable. One of ordinary skill in the art would not look to a stiff material useful, for example, as a boat hull or hard tops for SUVs, to duplicate the stiffness requirements of photographic paper.

None of the references teaches or suggests a single layer of foam with a density gradient, as presently claimed. Therefore, the references fail to disclose all of the limitations of the present claims.

Therefore, since the references, alone and in combination, fail to provide any suggestion to combine the references or modify the references to produce an article comprising an imaging layer and a base, wherein the base is a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam layer that has a density gradient, fail to include any likelihood of success in providing such an article and fail to include all of the limitations of the present claims, specifically with respect to a closed cell foam layer that has a density gradient, the Applicants request that the Examiner reconsider and withdraw the rejection.

Rejection Of Claims 1-13, 19-25, 28-39, and 41 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1-13, 19-25, 28-39, and 41 under 35 U.S.C. 103(a) as being unpatentable over USPN 5,916,672 to Reeves et al. in view of USPN 6,537,656 to Dontula et al, indicating that Reeves teaches an article comprising a base wherein said base comprises a closed cell polypropylene or polyurethane expanded foam core sheet, wherein said closed cell foam core

sheet comprises two closed cell foam layers, wherein said at least one closed cell foam layer, and wherein said closed cell foam core sheet has a density wherein said density comprises a gradient, Reeves teaches the density gradient in the polymer core is effected by the expansion of cells and amount of air entrapped and may be contained in a numerous amounts of layers to reach the chosen thickness and, while Reeves does not teach the polypropylene or polyurethane closed cell expanded foam layer comprises a polymer that has been expanded through the use of a blowing agent, using the identical polymers and, if the broad term "a gaseous phase" is intended to mean a material, Dontula teaches an article having a foamed polymer core comprising a polymer foam core, blowing agent, solid polymer matrix, and a gaseous phase as processing enhancements for the foam, making it obvious to one having ordinary skill in the art to have modified the foam of Reeves to use the ingredients as claimed in Dontula. The Examiner also indicates that although Reeves does not teach further comprising an imaging layer, Dontula '656 teaches an article having a foamed polymer core comprising an imaging layer such as ink jet, thermal dye, electrophotographic applied to the core to form a superior imaging support and image receiving layers for printability, improve adhesion, high opacity and whiteness and a flange and coating layer on the foam of polymers for support, flexural modulus, surface roughness or smoothness, and optical opacity and paper to provide brightness and a good starting surface and good formation strength , making it obvious to one having ordinary skill in the art to have modified the foam of Reeves to include an imaging layer such as ink jet, thermal dye, electrophotographic applied to the core.

Reeves discloses thermoplastic composite materials and, more particularly, thermoplastic multi-layer composite structure, which consists in a first embodiment of a co-extruded acrylic polypropylene outer skin and high melt strength polypropylene substrate which is attached to a first surface of a polypropylene foam core. An inner polypropylene skin can be provided and is attached to a second surface of the foam core. The foam core can either be constructed from an expanded polypropylene or an extruded polypropylene. Where an expanded polypropylene foam core is provided, the foam core is attached to the outer and inner skin through the use of a polypropylene adhesive. Where the extruded polypropylene foam core is provided, the skins can be

attached to the foam core through a welding or bonding process in lieu of adhesives. The polypropylene adhesives can also be utilized for attaching the skins to the extruded foam core. Additionally, the extruded foam core can vary in density to provide a composite foam core. Preferably, the various densities of the composite foam core are arranged such that the lowest density foam is provided at the center of the core and the varying densities of the foam core extend outward from the center in numerical order.

Dontula '656 discloses imaging media, which, in a preferred form, serve as supports for photographic, ink jet, thermal, and electrophotographic media. The imaging member comprises an imaging layer and a base wherein said base comprises a closed cell foam core sheet and adhered thereto an upper and lower flange sheet, and wherein said imaging member has a stiffness of between 50 and 250 millinewtons.

The present invention relates to an article comprising a base and at least one imaging layer. The base comprises a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam that has a density gradient.

To establish a prima facia case of obviousness, there must be some suggestion or motivation in the reference or in the general knowledge available to one skilled in the art to modify the reference, there must be a reasonable expectation of success, and the prior art reference must teach or suggest all the claim limitations.

The present claims are directed to a layer of foam that has a density gradient. The reference to Reeves teaches foam layers with the same gradient throughout the foam layer. To form a core of varying density, multiple layers of foam, each layer having a different density but the same density throughout the individual layer, are fused or bonded together. See Fig. 3-5, 7-10, as well as col. 3, lines 49-55, and col. 6, lines20-24 of Reeves. Dontula '656 is silent with respect to foams having density gradients. The references to Reeves and Dontula'656, whether alone or in combination, fail to teach or suggest the presently claimed foam core layer for an imaging element, wherein a single layer of foam has a density gradient.

Neither do the references provide any likelihood of success. Dontula'656, while disclosing foam for use in the support of an imaging element, fails to mention gradient density in the foam layer. Reeves discloses the use of multiple layers of foam, fused together, to produce a composite material which can be utilized to replace fiberglass or other materials such as polyurethanes during the manufacture of products normally containing fiberglass or the other materials as a primary component. Reeves does not provide any likelihood of success for the use of a foam core as a support in imaging elements. Neither would one of ordinary skill in the art look to the teachings of Reeves for information relating to the support for an imaging element, as the structure of Reeves provides properties, such as a relatively hard and stiff surface, superior impact strength as compared to fiberglass, and will absorb a relatively higher amount energy as compared to fiberglass, wood, composite structures containing polyurethane or similar structures. See col. 3, line 63 – col. 4, line 26, as compared to the present specification, at pg. 1, lines 8-12, pg. 16, line 6 – pg. 17, line 5, and pg. 19, line 13 – 24. As indicated, materials that are too stiff are not manufacturable. One of ordinary skill in the art would not look to a stiff material useful, for example, as a boat hull, to duplicate the stiffness requirements of photographic paper. Finally, Reeves requires multiple steps to produce a gradient core, that is, production of individual foam layers of differing densities and fusing the layers together, to produce a gradient density core. The present invention provides a foam layer with a density gradient in one step.

Neither reference teaches or suggests a single layer of foam with a density gradient, as presently claimed. Therefore, the references fail to disclose all of the limitations of the present claims.

Therefore, since the references, alone and in combination, fail to provide any suggestion to combine the references or modify the references to produce an article comprising an imaging layer and a base, wherein the base is a closed cell foam core sheet with at least one closed cell foam layer made of a polymer that has been expanded through the use of a blowing agent to form a single closed cell foam layer that has a density gradient, fail to include any likelihood of success in providing such an article and fail to include all of the limitations of the present claims, specifically with respect to a closed cell foam

layer that has a density gradient, the Applicants request that the Examiner reconsider and withdraw the rejection.

Claims 2-11, 14-20, 22- 49 benefit from dependence on claim 1 which Applicants believe is patentable over Reeves and Dontula as discussed above.

Double Patenting:

The Examiner has rejected Claims 1-49 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 6,537,656, in view of USP 5,916,672 to reeves et al. Similarly as in the rejections under 35 U.S.C. 103 based on Reeves et al. in view of Dontula '976 discussed above, however, the claims of USP 6,537,656 also fail to teach or suggest a single layer of foam with a density gradient. Reconsideration of this obviousness-type double patenting rejection for the same reasons as discussed above with the proposed combination of Reeves et al. and Dontula '976 is accordingly respectfully requested.

It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. Favorable reconsideration and early passage to issue is therefore earnestly solicited.

Respectfully submitted,

Attorney for Applicant(s)
Registration No. 33,564

Andrew J. Anderson/ct
Rochester, NY 14650
Telephone: 585-722-9662
Facsimile: 585-477-1148

Enclosures: Replacement Figures 1-3
Copies of Formal Drawings

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.